

METHOD OF DYNAMICALLY CONTROL-LING CACHE SIZE

Abstract

A power saving cache and a method of operating a power saving cache. The power saving cache includes circuitry to dynamically reduce the logical size of the cache in order to save power. Preferably, a method is used to determine optimal cache size for balancing power and performance, using a variety of combinable hardware and software techniques. Also, in a preferred embodiment, steps are used for maintaining coherency during cache resizing, including the handling of modified ("dirty") data in the cache, and steps are provided for partitioning a cache in one of several ways to provide an appropriate configuration and granularity when resizing.